IN THE U.S. PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of:
APPLICANTS: R. Thomas Derryberry
SERIAL NO.: 10/559,919 FILING DATE: December 07, 2005
EXAMINER: Miller, Brandon J. ART UNIT: 2617
ATTORNEY'S DOCKET NO.: 873.0121.U1(US)
TITLE: METHOD AND APPARATUS FOR SWITCHING MOBILE STATION BETWEEN AUTONOMOUS AND SCHEDULED TRANSMISSIONS

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Declaration Under 37 C.F.R. §1.131

Sir:

We, the inventors of the invention described and claimed in the above-identified patent application, declare as follows:

1. We conceived the invention in the United States, at least as early as April 1, 2002, a date on which an updated version of our invention report was saved, as noted below.

2. Exhibit A is a true copy of a company docket for Applicant's invention which shows the date of invention has been entered as May 10, 2002, which corresponds to the date the invention was received by Applicant's Intellectual Property Rights group, the company entered a decision date for the invention on April 25, 2003, and the invention disclosure was sent to outside counsel on May 5, 2003.

3. Exhibit B is a true copy of an invention report summary for Applicant's invention that is dated May 3, 2002, at the inventor's signature block.

4. Exhibit C is a true copy of a July 1, 2002 email from an inventor referring to an attached "Auto to Scheduled Mode" invention report that is also indicated as attached to the invention report summary of item 3 above.

5. Exhibit D is a true copy of selected pages (page numbers 1, 3, 4, 6-11) from the "Auto to Scheduled Mode" invention report referred to immediately above in item 4.

6. An international patent application corresponding to the invention described in the invention report referred to above was filed on June 27 2003.

We attest that the actions represented by the above exhibits occurred within the United States or a WTO country. All exhibits are true copies with the exception of being labeled herein for identification and redaction of confidential information.

I/We hereby declare that all statements made herein are true or are made on information and belief that is believed to be true. I further acknowledge that any willful false statements are punishable by fine or imprisonment, or both, in accordance with 18 U.S.C. § 1001; and that such willful false statements may jeopardize the validity of any patent that may issue from the application to which this Declaration pertains.

All Inventors:

Date: 11-27-07

By: R. Thomas Derryberry

Name: R. Thomas Derryberry

Date: _____

By: _____

Name: Liangchi Hsu

Date: _____

By: _____

Name: Mark W. Cheng

5. Exhibit D is a true copy of selected pages (page numbers 1, 3, 4, 6-11) from the "Auto to Scheduled Mode" invention report referred to immediately above in item 4.

6. An international patent application corresponding to the invention described in the invention report referred to above was filed on June 27 2003.

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All Inventors:

Date: _____

By: _____

Name: R. Thomas Derryberry

Date: Nov. 19, 2007

By: _____

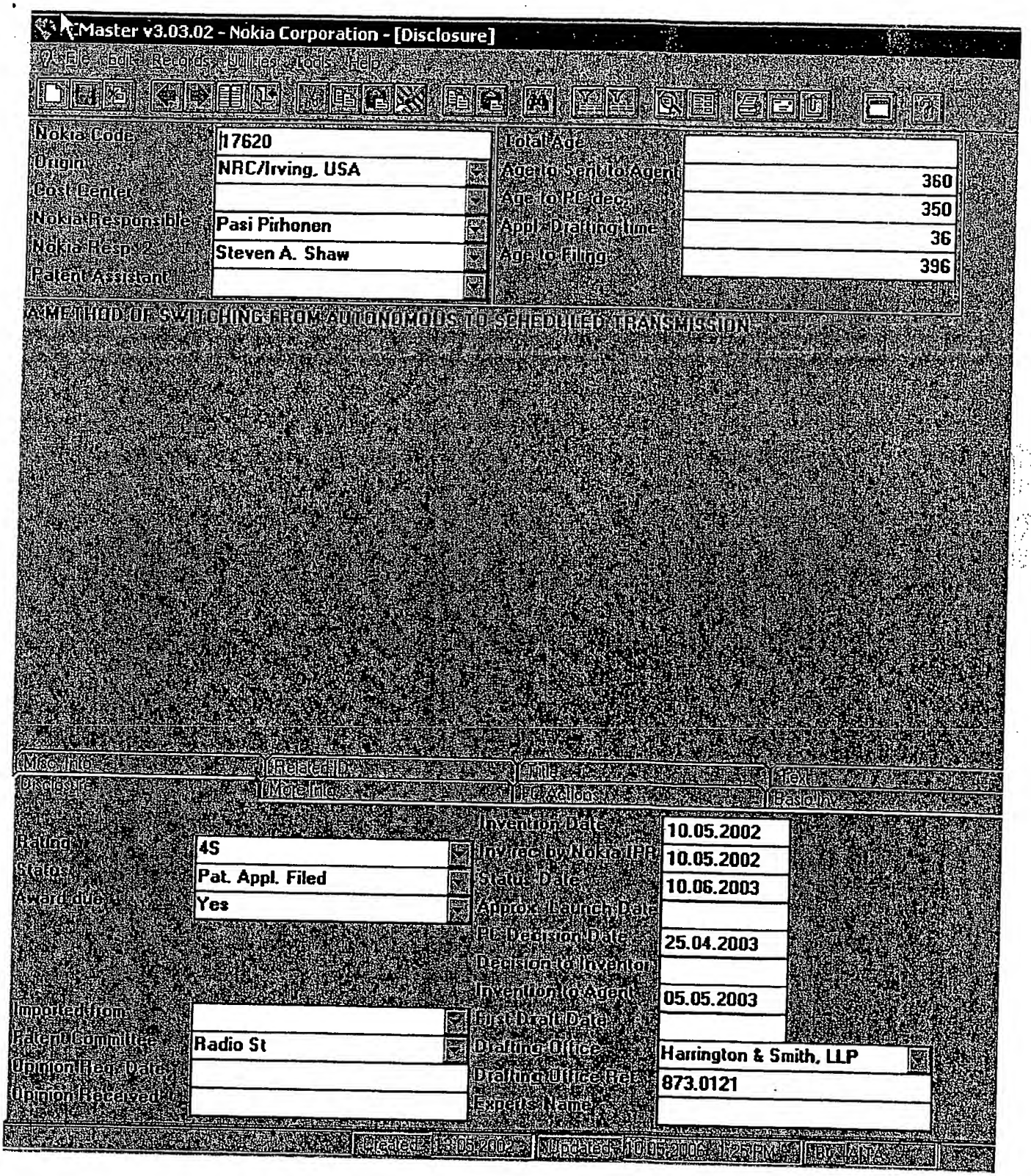
Name: Liangchi Hsu

Date: Nov. 19, 2007

By: Mark W. Cheng

Name: Mark W. Cheng

Exhibit A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File Edit Records Utilities Tools Help
Nokia Code
17620
Origin
NRC/Irving, USA
Cost Center
Nokia Responsible
Pasi Pirhonen
Nokia Resp 2
Steven A. Shaw
Patent Assistant
Total Age
Age to Sent to Agent
360
Age to PC dec.
350
Appl. Drafting time
36
Age to Filing
396
A METHOD OF SWITCHING FROM AUTONOMOUS TO SCHEDULED TRANSMISSION
Misc Info
Related Ip
Title
Rex
Disclosure
More Info
PR Actions
Basic Inv
Rating
4S
Status
Pat. Appl. Filed
Award due
Yes
Invention Date
10.05.2002
Invrec by Nokia IPR
10.05.2002
Status Date
10.06.2003
Approx. Launch Date
PC Decision Date
25.04.2003
Decision to Inventor
Invention to Agent
05.05.2003
Imported from
Fst Draft Date
Patent Committee
Radio St
Drafting Office
Harrington & Smith, LLP
Opinion Req. Date
Drafting Office Ref.
873.0121
Opinion Received
Expert's Name
Created
Updated
10.05.2006 1:23 PM
By JAP

NC17620 A Method of Switching From Autonomous to Scheduled Transmission

Invention description - Signed by Federico Fraccaroli/DA1/NTC/Nokia on 10.05.2002 22:21:36, acco

Nobody can edit the description after this report is submitted for evaluation. ?

Inventors' Notes usernames ?	Inventors' email addresses ?
Tom Derryberry /DA1/NRC/Nokia, Alan Hsu/SD1/NMP/Nokia, Mark Cheng/SD1/NMP/Nokia	Tom.Derryberry@nokia.com Alan.Hsu@nokia.com Mark.Cheng@nokia.com
Home addresses ? 2620 Oak Grove Drive Plano, TX 75074 12855 Seabreeze Frams Drive San Diego, CA 92130 4170 via Mar de Delfinas San Diego, CA 92130	Cost center of the first inventor ? Employee number(s) ?
One sentence crystallization of the invention ? The purpose of this invention is to define the procedure and method to accomplish the switching from autonomous to scheduled mode .	
One paragraph description of the invention ? For cdma2000 1xEV-DV reverse link framework , it is desirable to support both autonomous mode and scheduled mode of operation for R -SCH. Many technical issues need to be resolved to make these two modes work together . Among other issues , to operate these two modes alternatively , one of issues is how to transition between two modes . This invention first describes each R -SCH state and then describes state transitions . This IPR is intended to fully cover all possible options for states design and state transitions . This invention also fits QoS parameters and leaky bucket model (using QoS BLOB) into mode transitions .	
Related project ?	In my opinion the invention belongs to category (not necessary to fill in) ? __ A __ B __ C __ D
Publication date (e.g.15-Jan-2001) ? 10-Jun-2002	Place or method of publication: ? 3GPP2, Most likely during July meeting , but possibly June meeting disclosure .
I/we consider the invention to belong to the category indicated above and to my/our best knowledge, I am / we are the sole and original inventor(s) of the invention. The company may, by virtue of the valid legislation, be entitled to full or partial rights to the invention. I/we acknowledge my/our obligation to sign as inventor(s) all documents that may be required for protecting the invention in different countries	Signature of inventor(s) ? Date: 03-May-2002 Signature:

Other technical information or attachments: ?

RL Auto to Scheduled Mode invrep_0401_2002_R1.doc

More report data

Data related to the report handling. ?

Job position of the first inventor	Default patent engineer
Assistant Research Manger	Federico Fraccaroli/DA1/NTC/Nokia
Related BU ? NRC, NMP, NET	__ Prior art search results are attached/available.

Suggested reviewers, customers or experts ?	Email addresses of the suggested reviewers etc. ?
Tom Derryberry /DA1/NRC/Nokia Federico Fraccaroli /DA1/NTC/Nokia Craig Greer /DA1/NMP/Nokia Mitch Tseng /DA1/NMP/Nokia Giridhar Mandyam /DA1/NRC/Nokia Steven Shaw /DA1/NMP/Nokia John Terry /DA1/NRC/Nokia Tony Reid /DA1/NTC/Nokia Beverly Meredith /DA1/NMP/Nokia Tom Sexton /DA1/NMP/Nokia Ilkka Niva /SD1/NMP/Nokia Milan Patel /SD1/NMP/Nokia Mark Cheng /SD1/NMP/Nokia	Tom.Derryberry@nokia.com Federico.Fraccaroli@nokia.com Craig.Greer@nokia.com Mitch.Tseng@nokia.com Giridhar.Mandyam@nokia.com Steven.Shaw@nokia.com John.Terry@nokia.com Tony.Reid@nokia.com Beverly.Meredith@nokia.com Tom.Sexton@nokia.com Ilkka.Niva@nokia.com Milan.Patel@nokia.com Mark.Cheng@nokia.com
Superior of the inventor Craig Greer /DA1/NMP/Nokia	Signature of the superior of the inventor

Description of related paper documentation or other report links ?

Exhibit B

Registration

Status of the report: Final decision
Reception date: 6-May-2002
PC decision date: 5-May-2003

Code: NC17620	Nokia Business Unit NRC
Assigned patent engineer: Steven Shaw /DA1/NMP/Nokia	Assigned patent engineer email: Steven.Shaw@nokia.com
Technical field of invention:	Standard Contribution #
The basic invention (crystallization):	
Classification:	Rating: 2S
Patent Committee	Place:
Signature:	Edit history of this invention report: 06/05/2003 11:40:19 AM by Steven Shaw 06/05/2003 11:40:09 AM by Steven Shaw 05/05/2003 11:39:10 AM by Steven Shaw 04/25/2003 03:14:21 PM by Steven Shaw 05/10/2002 02:21:36 PM by Federico Fraccaroli

Other related links:

Patent Committee decision

Decision code: PAT	Author of the decision: Steven Shaw
I make it known hereby that the company has decided to:	The invention belongs to category: __ A __ B __ C __ D

[ ] reserve the invention for the company [ ] reserve the right to use the invention [ ] allow the inventor(s) the liberty for independent action [ ] issue the enclosed statement [ ] keep the invention secret [X] apply for a patent on the information [ ] refrain from applying for a patent on the invention [ ] postpone the decision about applying for a patent	

More decision info:
PC decision made by on 5/5/2003 (decision submitted on 5/5/2003.)

Final Nokia decision

Decision code: PAT	Author of the decision: Steven Shaw
I make it known hereby that the company has decided to: [ ] reserve the invention for the company [ ] reserve the right to use the invention [ ] allow the inventor(s) the liberty for independent action [ ] issue the enclosed statement [ ] keep the invention secret [X] apply for a patent on the information [ ] refrain from applying for a patent on the invention [ ] postpone the decision about applying for a patent	The invention belongs to category: [ ] A [ ] B [ ] C [ ] D
Reward: USD 560	Date of final decision: 05.05.2003

More decision info:
PC decision accepted as final Nokia decision by Steven Shaw/DA1/NMP/Nokia on 05/05/2003

I ACKNOWLEDGE RECEIPT OF THE COMPANY DECISION REGARDING THE INVENTION INDICATED ABOVE
Signature of inventor(s) Date: Signature:

Other acknowledgement related information:

Exhibit B

Exhibit C

Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

Patent-Agency Harrington-Smith (EXT-RES/Usa)

From: Derryberry Tom (Nokia-SIR/Dallas) **Sent:** Mon 7/1/2002 11:28 AM
To: Greer Craig (Nokia-SIR/Dallas)
Cc:
Subject: Auto to Scheduled
Attachments: RL Auto to Scheduled Mode Invrep_0401_2002_R1.doc(255KB)

Craig,

I have attached the invention report. I believe this is newer.

Thomas

<<RL Auto to Scheduled Mode invrep_0401_2002_R1.doc>>

Exhibit D

NOKIA

CONFIDENTIAL

INVENTION REPORT

Title of invention: A METHOD OF SWITCHING FROM AUTONOMOUS TO SCHEDULED TRANSMISSION	**INVENTION REPORT RECEIVED** Code: Patent Committee: Place: Date: Signature:
THE DESCRIPTION OF THE INVENTION MUST BE ATTACHED	

Inventor's name, employee number, title and nationality: *)	Home Address: *)	Business Unit and cost centre:
R. Thomas Derryberry, Assistant Research Manager, US	2620 Oak Grove Drive Plano, TX 75074 USA	NRC/RAD/,
Liangchi (Alan) Hsu Nationality: US	12855 Seabreeze Farms Dr.San Diego, CA 92130	NMP SRS Cost center:
Mark W. Cheng Nationality: US	4170 via Mar de Delfinas San Diego, CA 92130	NMP SRS Cost center:

Line Manager(s): S. Craig Greer

Project : Project Manager: R. Thomas Derryberry and Ilkka Niva

Office address: *) 6000 Connection Drive MS 2:700 Irving, TX 75039

Phone: *) +1-972-894-5058 Fax: *) +1-972-894-5058

The invention becomes public on: May 3GPP2 Meeting

I am/ We are the sole/ and original inventor(s) of this invention.

The company may, by virtue of applicable legislation, be entitled to full or partial rights to the invention. I/ We acknowledge my/ our obligation to sign as inventor(s) all documents that may be required for protecting the invention in different countries.

Applicable to inventions made by inventors employed in FI, DK, DE and SE only.

Unless the inventor requests the Invention Report to be responded to within four (4) months from the date this Invention Report is received for such other period as the mandatory provisions of the applicable local law may otherwise require, the inventor consents to the right of the employer to use a reasonable period of time for the evaluation of the invention. A reasonable period of time may exceed four (4) months.

☐ *I/ We request that the Invention Report be responded to within four (4) months.*

Date:
Signature(s) of Inventor(s):

*) See the instructions

I have read and understood the invention described in this Invention Report

Date:
Signature of Manager

DESCRIPTION OF THE INVENTION

1. Field and background of the invention

The work to standardize the complementary uplink structure, Enhanced Uplink Packet Access (EUPA), to 1XEV-DV, Release D, will soon start in 3GPP2. At the present there is no provision for transitioning the MS from autonomous to scheduled transmission mode. The purpose of this invention is to define the procedure and method to accomplish this scheduled switching mode.

2. A summary of the invention

As stated earlier, the purpose of this invention is to enhance the current reverse link for IS2000 with the addition of a mode for the MS to transition to scheduling transmission from autonomous transmission. Figure 1 depicts the scenario while the MS is in the active state. The transition proceeds as follows:

1. The MS initiates data transfer on the R-EACH (Reverse Enhanced Access Channel). This initial transmission may include a SCRM (Supplemental Channel Request Message). If not, this SCRM will have to be sent subsequent to the initial transmission.
2. IF the BS acknowledges the MS via the following:
   The BS sends an acknowledgement indicator (AI) along with a SCAM (Supplemental Channel Assignment Message) informing the MS of its channel assignment. In addition to this, the BS will send via the CPCCH (Common Power Control Channel) the PCB (power control bits), RGB (Rate Grant Bits), and the ACK/NAK bits (The form of this is in another more generic invention report).
   THEN the MS will transmit its data along with BAB (Buffer Activity bits) and RRB (Rate Request bits).
   ELSE
   The MS is denied permission to transmit and will have to repeat Step 1.
   ENDIF
3. The MS and BS jointly "close the reverse data transmission loop" via the MS sending its data + BAB + RRB and the BS responds with PCB + RGB + ACK/NAK.

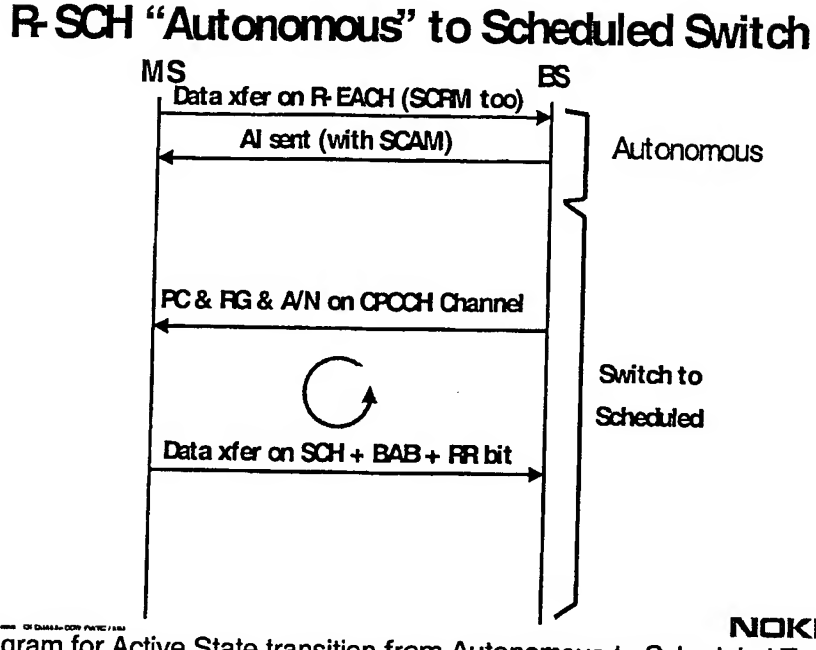

Figure 1: Diagram for Active State transition from Autonomous to Scheduled Transmission

When the MS is in Control Hold state the MS would need to transition out of control hold prior to initiating data transfer.

3. Describe the problem which the invention overcomes

The BS does not know when the MS needs to transmit data at any given time in packet data systems. Hence the MS is permitted to initiate this process by starting in an autonomous mode of data transmission followed by BS control of whether or not the data transmission may continue (entering into scheduled mode). This can in effect reduce the delay associated with reverse link transmission (startup).

4. How was the problem solved earlier?

There were several proposals considered for 1XEV-DV, but no decision was made pending further details of these procedures. For the moment the current method is to use L3 signalling already defined in IS2000.

5. How does the invention improve earlier solutions? Advantages and disadvantages of the invention?

Advantages

- The BS does not know when the MS needs to transmit data – this allows the MS to autonomously start data transmission
- The BS has control of whether or not to permit the MS to continue transmission hence it can control the ROT (Rise Over Thermal) (ROT)

Disadvantages

- Not known/explored at this time.

I have read and understood the invention described in this Invention Report

Date:
Signature of Manager

IPR ATTACHMENT

I. INTRODUCTION

In any data communications where the transmission resource is shared by multiple users or the transmission quality of multiple users can be affected by each other, there can be two modes of channel operation: (1) Autonomous Mode and (2) Scheduled Mode. The former doesn't necessarily require resource *request-grant* relationship between the transmitters and receiver(s) prior to the communication, while the latter requires an arbiter (e.g. the receiver) to authorize and/or schedule transmission for multiple transmitters. There are cons and pros for these two modes of operation. For example, the autonomous mode is suitable for small packet or circuit-like transmissions, and the scheduled mode is suitable for latency-insensitive transmission.

For cdma2000 1xEV-DV reverse link framework, it is desirable to support both autonomous mode and scheduled mode of operation for R-SCH. Many technical issues need to be resolved to make these two modes work together. Among other issues, to operate these two modes alternatively, one of issues is how to transition between two modes. This invention first describes each R-SCH state and then describes state transitions. This IPR is intended to fully cover all possible options for states design and state transitions. This invention also fits QoS parameters and leaky bucket model (using QoS BLOB) into mode transitions.

II. R-SCH States

As shown in Figure 2, there are four (4) R-SCH states/modes and eight (8) transitions among states/modes in cdma2000 1xEV-DV. Note that the terminologies of "state" and "mode" are exchangeable in this report. Four states are R-SCH initialisation state, R-SCH autonomous state, R-SCH scheduled state, and R-SCH release state. Section II describes "states" and Section III describes "transitions".

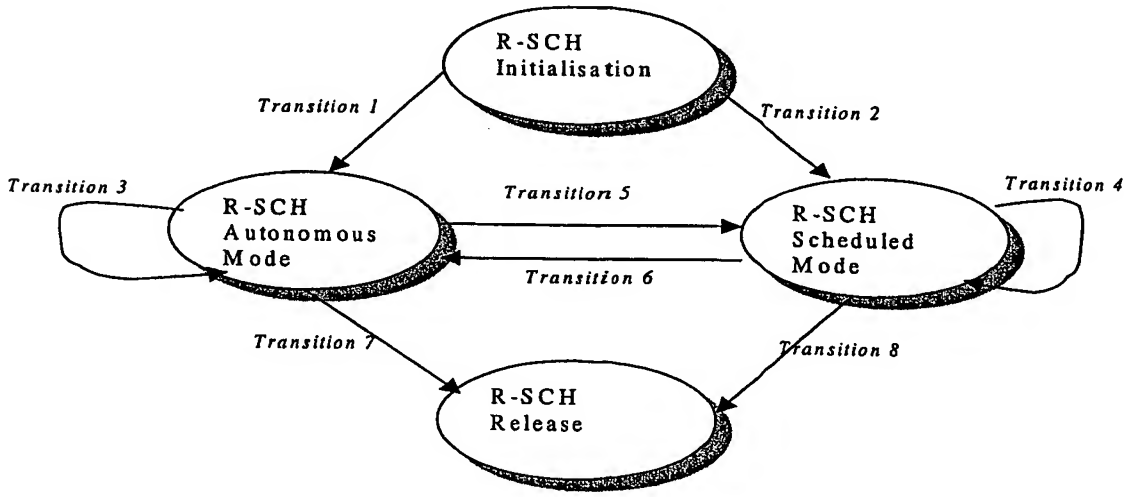

Figure 2: 1xEV-DV R-SCH States and Transitions

II.1 R-SCH initialisation State

This state is enhanced from 1xRTT R-SCH initialisation. The methods to initialise R-SCH have many options:

Option 1:

The MS sends Supplemental Channel Request Message (SCRM) over R-DCCH/R-FCH to the BS. The BS acknowledges with Extended Supplemental Channel Assignment Message (ESCAM) over F-FCH/F-DCCH/F-PDCH. This is same as 1xRTT approach.

Option 2:

The MS sends Supplemental Channel Request Mini Message (SCRMM) over R-DCCH/R-FCH to the BS. The BS acknowledges with Supplemental Channel Assignment mini Message (SCAMM) over F-FCH/F-DCCH/F-PDCH/F-CACH. This is same as 1xRTT approach.

Option 3:

The MS sends *modified* Supplemental Channel Request Message (SCRM) over R-DCCH/R-FCH to the BS. The BS acknowledges with modified Extended Supplemental Channel Assignment Message (ESCAM) over F-FCH/F-DCCH/F-PDCH/. The modified SCRM includes parameters such as:

- MS buffer status,
- MS preferred mode of R-SCH operation (either Autonomous or scheduled mode),

The modified ESCAM includes parameters such as:

- MAC_ID (medium access control ID) to identify the MS for R-SCH access, and
- Bit positions of control information (e.g. PC, RG, and A/N are explained in other Nokia documents) in power control subchannel (i.e. F-FCH, F-DCCH, or F-CPCCH).

Note that the MAC_ID can be the same as the MAC_ID for F-PDCH, if the F-PDCH exists for this MS. Also, the MAC_ID in SCAM can be replaced with a mapping identifier serving as reverse link R-SCH access ID.

Option 4:

The MS sends Supplemental Channel Request Message (SCRM) over R-DCCH/R-FCH to the BS. The BS acknowledges with modified Extended Supplemental Channel Assignment *mini* Message (ESCAMM) over F-FCH/F-DCCH/F-PDCH/F-CACH. The ESCRMM includes parameters as in Option 3.

Option 5:

The MS sends requests over R-EACH with additional TBD parameters. The TBD parameters will specify R-SCH characteristic and its preferred mode of operation. This approach is similar to Nokia's R-EACH approach for R-DCCH allocation and transmission.

II.2 R-SCH Autonomous Mode

In this mode of operation, the MS can access R-SCH without prior authorization. The operation in this mode has two options:

Option 1:

For *fixed/constant data rate* applications, all active or "control-hold" mobile stations can sends data over R-SCH autonomously at the date rate according to any of the following design rules:

(1) at the lowest data rate, i.e. 9.6kbps
(2) at the low fixed data rate that is configurable by the BS, or
(3) at the minimum rate that is dynamically agreed upon by the MS and BS, e.g. the data rate negotiated by exchanging QoS BLOB according to IS-2000.5 procedures.

All active or "control-hold" mobile stations should have been assigned with MAC_ID in the R-SCH initialisation state or in F-PDCH assignment phase. The MAC_ID is used by the BS to distinguish multiple autonomous mobile stations. However, the BS also can distinguish multiple autonomous mobile stations by decoding MS's long code without having the knowledge of its MAC_ID.

This option can be used for short frame transmission or low data rate applications.

Option 2:

Similar to 1xEV-DO (a.k.a HDR), the MS, along with R-SCH user traffic transmission, can explicitly sends "Rate Indication" information over a reverse channel to indicate the data rate concurrently is used at the present R-SCH frame. The reverse "rate indication" channel can be a separate dedicated Walsh coded channel, common channel, or a time-multiplexed channel with other channels.

II.3 R-SCH Scheduled Mode

There are two options for R-SCH scheduled mode.

Option 1:

Similar to cdma2000 1xRTT, the R-SCH procedures and relevant messages are used. The MS requests R-SCH channel assignment, and the BS schedules and assigns R-SCH channel with specific data rate and time duration.

Option 2:

For *variable data rate* applications, the following operation can also be considered as a "semi-scheduled" mode.

MS Procedures:
The mobile station starts with the autonomous mode at the low data rate as defined above. While sending data over R-SCH, the MS also sends "data rate request" to the BS. This data rate request has the following characteristic:

- This data rate request is 1-bit information with three-state modulation (i.e. -1, 0, and 1),
- This data rate request can be carried over
  - (1) An uplink overhead dedicated or common channel
  - (2) The R-SCH with a special Multiplexing option where the user traffic and control information can be multiplexed.

- This data rate request can be reflected as the MS dynamic buffer status report to the BS, In other words, this data rate request bit can be referred as BAB (buffer activity bit).
- The definition of this data rate request is as follows:
  - If BAB == INCREASE == 1, the MS is requesting to transmits on R-SCH at the data rate of (current data rate + incremental rate), where incremental rate = increased step rate,
  - If BAB == DECREASE == -1, the MS is requesting to transmits on R-SCH at the data rate of (current data rate - decremented rate),
  - If BAB == CONSTANT == 0, the MS is requesting to transmits on R-SCH at the same data rate as the current data rate.

BS Procedures:
Upon receiving the data rate request of INCREASE/DECREASE/CONSTANT from the MS, the BS will acknowledge (i.e. grant or deny) the MS with 1-bit information of GRANT/DENY. This 1-bit information has the following characteristic:

- It is carried over power control sub-channels within F-FCH, F-DCCH, or F-CPCCH,
- This 1-bit information is time-multiplexed with power control bit (in F-FCH, F-DCCH, or F-CPCCH) and other control information. For higher transmission reliability of this bit, the bit repetition can be applied,
- Definition of this bit is as follows:
  - If the 1-bit feedback = GRANT = 1, the BS allows the MS BAB request
  - If the 1-bit feedback = DENY = -1, the BS denies the MS BAB request

Timing relationship between MS process and BS process:
The autonomous data rate request (by the MS) and grant (by the BS) has a certain timing relationship. Figure 3 shows a timing example. Special notes for the timing relationship in Figure 3 are:

1. Steps 1-a and 1-b, at any power control group (PCG), any mobile station (e.g. MS-1 or MS-2) can request to increase, decrease, or maintain the data rate;
2. After Delay time D1, the BS receives and processes the request. And the BS sends the acknowledgement to MS at the designated PCG;
3. After Delay time D2, the MS starts transmitting on R-SCH at the data rate that is agreed upon.
4. The rate control can be "per PCG" or "per frame";
5. The value of D1 and D2 is controlled or configured by the base station.

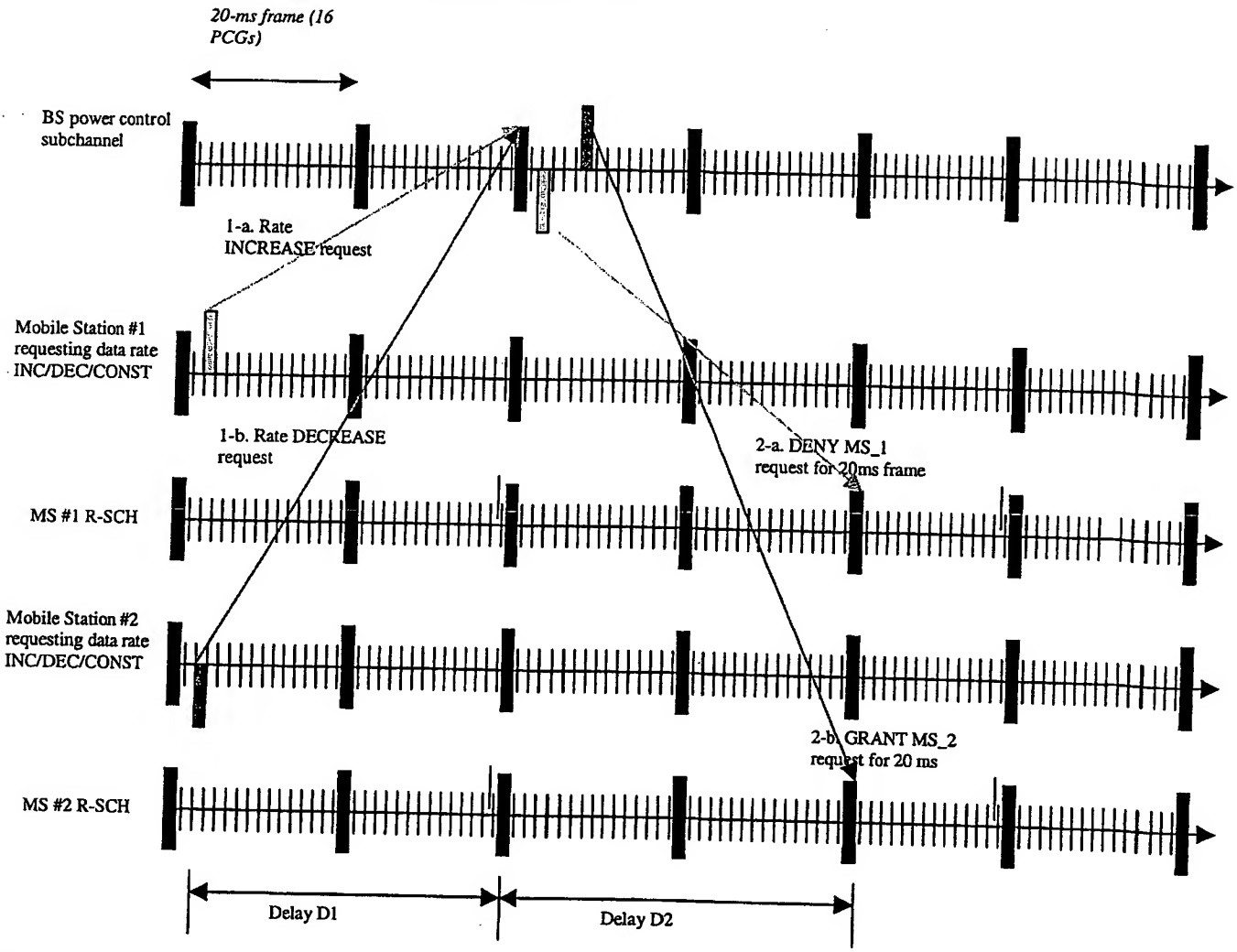

Figure 3: Timing relationship between data rate request and grant where Delay D1 and D2 are base station configurable.

II.4 R-SCH Release State

This state is similar to cdma2000 1xRTT.

III. R-SCH State/Mode Transitions

Events (or Methods) for eight transitions are described in Table 1.

Table 1: R-SCH State/Mode Transitions

Transition	Event/Method
1	The preferred mode of operation is embedded in (modified) R-SCH assignment (mini) message.
2	The preferred mode of operation is embedded in (modified) R-SCH assignment (mini) message.
3	Option 1: The MS stays in Autonomous mode

I have read and understood the invention described in this Invention Report

Date:
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	when it is continuing transmission at the low (or lowest) data rate. Option 2: The MS stays in Autonomous mode when the reverse rate indication indicates a legitimate data rate (instead of a mode switch indication).
4	The MS stays in Scheduled Mode as long as: (1) There is no new mode switch request in SCRM (2) The MS/BS still operates based on data rate request-grant "scheduled" procedures defined in this report.
5	Option 1: The preferred mode of operation is embedded in (modified) R-SCH assignment (mini) message. Option 2: The transition trigger can be by a leaky bucket model where different bucket depth corresponding to scheduled mode and its transition.
6	Option 1: The R-SCH assigned duration timer is used as the trigger, i.e. after the duration of the scheduled transmission, the mobile station fells back to the Autonomous mode. Option 2: The preferred mode of operation is embedded in (modified) R-SCH assignment (mini) message. Option 3: The transition trigger can be by a leaky bucket model where different bucket depth corresponding to Autonomous mode and its transition.
7	Similar to 1xRTT, using R-SCH release messages and procedures.
8	Similar to 1xRTT, using R-SCH release messages and procedures.

IV Summary

For cdma2000 1xEV-DV reverse link framework, it is desirable to support both autonomous mode and scheduled mode of operation for R-SCH. This invention first describes each R-SCH state and then describes state transitions. This IPR is intended to fully cover all possible options for states design and state transitions. This invention also fits QoS parameters and leaky bucket model (using QoS BLOB) into mode transitions.

I have read and understood the invention described in this Invention Report

Date:

Signature of Manager